

**STATE OF CALIFORNIA**  
**ENERGY RESOURCES CONSERVATION**  
**AND DEVELOPMENT COMMISSION**

<b>DOCKET</b> <b>04-IEP-1G</b>
DATE JUL 15 2005
RECD JUL 15 2005

In the Matter of:  
Informal Proceedings and Preparation of the 2005  
Integrated Energy Policy Report.

Docket No. 04-IEP-1G

**COMMENTS OF WEST COAST POWER ON THE STAFF  
REPORT ON ISSUES AND ENVIRONMENTAL IMPACTS  
ASSOCIATED WITH ONCE-THROUGH COOLING AT  
CALIFORNIA'S COASTAL POWER PLANTS**

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Date: July 15, 2005

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**I. INTRODUCTION**

West Coast Power LLC ("WCP") appreciates the opportunity to comment on the Staff Report entitled "Issues and Environmental Impacts Associated with Once-Through Cooling at California's Coastal Power Plants" ("OTC Report"). WCP owns three of the 21 facilities with once-through cooling systems, including the El Segundo Generating Station ("El Segundo"), Encina Power Station ("Encina"), and the recently retired Long Beach Generating Station.

For reasons presented below, WCP strongly recommends that the Commission not adopt or implement the policy options recommended in the OTC Report and that further discussion about possible policy development be deferred until the relevant and appropriate information regarding impingement and entrainment at the subject facilities is collected and evaluated as part of the US EPA Phase II 316(b) regulatory process.

While the OTC Report does a good job of describing the history of the evaluation of impingement and entrainment effects at the 21 coastal power plants that use once-through cooling systems, it takes an unscientific leap of faith regarding impacts to the marine

environment and biological communities in the vicinity of these facilities. Specifically, the report is flawed since its conclusions and recommendations are not based on factual or complete information. Those sections of the report are described in more detail below.

## **II BROAD CONCLUSIONS OF SIGNIFICANT IMPACTS AT ALL FACILITIES ARE UNJUSTIFIED**

The report concludes that the impacts to marine biological communities by power plants utilizing once-through cooling are uncertain, but potentially very large and that these facilities are contributing to the declines in fisheries along the California coast. The report makes these conclusions while at the same time describing the level of understanding of this issue as very poor and understudied.<sup>1</sup> It appears that these conclusions are based on assessments at a few facilities and then generalized to apply to the whole group of facilities. The US EPA's new Phase II 316(b) regulation concluded that impingement and entrainment effects are site specific in nature, therefore it is reasonable to assume that impacts would be site specific as well. Thus, the report's broad-based conclusions are without appropriate factual and complete site-specific information and therefore should be rejected. Only where there has been sufficient data collection is it appropriate to reach any conclusions.

Furthermore, some of the conclusions of significant impacts are drawn from assumptions and methodology that, more likely than not, would significantly over estimate impacts. For example, the assumption behind many of the entrainment studies is that there is 100% mortality of organisms that pass through the once-through cooling systems. Admittedly, there are few studies that suggest there are higher survival rates through power plants, but at the same time

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<sup>1</sup> The lack of understanding of the magnitude of the impact of once-through cooling systems as a result of inadequate and standardized studies of entrainment is referenced at least three times in the Executive Summary alone.

there are few studies that indicate 100% mortality is the right assumption. Using 100% mortality as a modeling assumption will result in conservative estimates of assumed impacts that may profoundly over estimate the actual impacts.

The OTC Report also recommends that impacts should be characterized as estimates of Habitat Production Forgone, i.e., the area of habitat necessary to replace the larval production lost due to entrainment. The Habitat Production Forgone approach does not include life history information that account for natural compensatory mechanisms that are necessary in estimating production. It is difficult to perceive a situation where there is absolutely no natural compensation for fish larvae where the processes of natural mortality are extremely high, usually greater than 99 percent. As a result, estimates of lost production using Habitat Production Forgone may be grossly overstated.

### **III CHARACTERIZATIONS OF FACILITY IMPINGEMENT AND ENTRAINMENT STUDIES ARE INCOMPLETE**

The report asserts repeatedly that the majority of the facilities have not conducted recent and scientifically valid impingement and entrainment studies. That would imply, as stated above, that it is inappropriate to draw conclusions about those facilities. The report is also silent on the fact that all of these facilities have been routinely subjected to agency scrutiny and public comments in the renewal of their NPDES permits, and are subject to the US EPA's Phase II 316(b) regulation, which requires additional impingement and entrainment characterizations of each applicable facility. As part of that regulation, current impingement and entrainment sampling and evaluations are conducted under the supervision of the applicable Regional Water Quality Control Board. Most of those studies are currently on going (e.g. Encina just completed its one-year impingement and entrainment monitoring in June 2005) or will commence in the

next six months (e.g. El Segundo). Therefore, the staff's characterization that the facilities are doing nothing to evaluate this issue is erroneous. Such studies are already taking place pursuant to the Phase II 316(b) regulation and in coordination with the Regional Water Quality Control Boards.

**IV THE RECOMMENDATION FOR COMMISSION POLICY ACTION IS COUNTERPRODUCTIVE TO A POLICY OF ECOURAGING AGING POWER PLANT REPOWERING EFFORTS AND ENERGY EFFICIENCY**

The report urges the Commission to adopt a policy that would effectively ban the continued use of existing once-through cooling systems in any power plant modernization project unless an alternative form of cooling was to found to be environmentally undesirable and economically unsound. Such a policy decision regarding use of ocean cooling is not in the best interests of California's energy future for the following reasons.

First, such a policy may prevent or adversely affect repowering of these facilities, which account for nearly one-third of all of California's in-state generation resources. The 2004 Update to the Integrated Energy Policy Report indicates that as many as 9,000 MW of aging power plants are considered to be at risk for retirement by 2008. While it is doubtful that all of these aging power plants will be retired, additional steps must be taken to ensure that California has adequate supplies over the next few years. The consequences of not taking actions to address potential supply shortfalls due to plant retirements would expose consumers and businesses to unacceptable risks. Staff recommendations are also counter-productive to the goals and interests of various state agencies (including the Energy Commission) and government policy that support repowering facilities with more efficient generating units. More specifically, the California Public Utilities Commission stated in their December 16<sup>th</sup> Long Term Procurement Order (D04-12-048) the following repowering policy;

"To this end, we agree that modernization of old, inefficient, and dirty plants should be among the IOU's first choices of resources. However, we are concerned that the Least Cost Best Fit process would not allow positive attributes of a brownfield site to be fully considered or fairly assessed (for example, the risk of delay in construction of a new site). We disagree with SDG&E's position that the RFP process should automatically incorporate the positive attributes of the brownfield sites. It is generally good policy to consider brownfield sites before developing greenfield sites, because of existing infrastructure, being close to load centers, and many other benefits. Therefore, we direct the IOUs to consider the use of brownfield sites first and take full advantage of their location before they consider new generation on greenfield sites. If IOUs decide not to use brownfield, they must make a showing that justifies their decision." (at pp146-147)

Additionally, Assembly Speaker Fabian Nunez has authored a repowering bill AB 1576, that deems a contract between an investor-owned utility (IOU) and specific generation facilities "reasonable per se" and allows the costs to be recovered through rates. Generation facilities must meet specific criteria as a repowered facility, including a requirement that it must replace an older less-efficient facility, must be located on an optimal site close to customers, can utilize some of the existing infrastructure and is needed for local reliability. This bill has passed without opposition in the Assembly Utilities and Commerce Committee, Assembly Appropriations Committee, the full Assembly and the Senate Energy, Utilities, and Communications Committee. The Staff Report is clearly at odds with the California legislature's intent to encourage repowering projects on "brownfield" sites.

In the *2003 Integrated Energy Policy Report*, the Energy Commission noted that the state could help reduce natural gas consumption from electric generation by retiring older, less efficient natural gas-fired power plants and repowering, replacing, or refurbishing them with new, more efficient plants. Moreover, the *2004 Update to the Integrated Energy Policy Report* stated that aging plants that prove critical for local or regional reliability should be repowered, refurbished, or replaced, to achieve a reduction in local environmental impacts in highly

populated load centers. Therefore, adopting a policy of limiting cooling options will negatively affect repowering plans, and have far reaching impacts on the state's goals for electrical resources and efficient use of natural gas.

Second, the restrictive policy recommendations of the OTC Report would unreasonably delay or prevent the efficient co-location of much-needed ocean desalination facilities.

Desalination facilities are energy intensive and have a high baseload energy usage. These plants located on the sites of coastal power plants will not only utilize electricity from power plants but will also use the heated discharge water, thus requiring less energy to heat water to the proper temperature. If a desalination project was concurrently proposed with a coastal power plant modernization project and if the Commission made once-through cooling a low priority cooling water option that could only be utilized if certain conditions occurred regarding alternative cooling systems, then the efficient co-location of desalination with a coastal power plant would likely be delayed and possibly prevented. Such restrictions would not be in the best interests of developing new sources of water supply in California. Like electricity, California's water situation suffers from insufficient supply to match demand. California needs to employ an integrated program for increasing water supplies that includes ocean desalination in addition to conservation and recycling.

Repowering critical coastal power plants bring many benefits to California including low-cost efficient generation, in-load generation resources, low emission generation resources, preservation of existing freshwater sources (by avoiding the use of freshwater or reclaimed water for cooling), etc. All of these needs should be considered carefully before moving forward with policies such as these being recommended in the OTC Report.

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Comments from West Coast Power LLC on Docket 04-IEP-1G, Electricity Environmental Performance Report.

Thank You,  
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**V      WCP SUPPORTS COMPREHENSIVE IMPINGEMENT AND ENTRAINMENT STUDIES AND REDUCTIONS IN IMPINGEMENT AND ENTRAINMENT THROUGH PHASE II 316(b)**

While WCP is not supportive of implementation of the policy recommendations in the OTC Report, we are supportive of comprehensive impingement and entrainment evaluations at both of the operating WCP facilities with once-through cooling systems. As previously noted, WCP has already completed all of its one-year sampling efforts at Encina and will be completing the fish taxonomy, modeling, and report production throughout the rest of this year. At El Segundo, a draft sampling plan will be submitted to the Los Angeles Regional Water Quality Control Board before August 1, 2005, and it is expected that the one-year impingement and entrainment monitoring program will be initiated in January 2006. The WCP sampling methodology is consistent with the study programs recently conducted at other power plants that have been reviewed and accepted by CEC Staff.

Further, WCP continues to evaluate its options for compliance with Phase II 316(b) including assessments of possible technological upgrades to the intake structures, operational changes that may reduce cooling water flow rates, and possible restoration measures that would provide real offsets to impingement and entrainment at these facilities.

**VI      CONCLUSION**

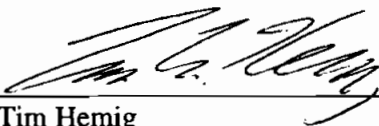
WCP takes pride in being a leader in properly and completely evaluating its impingement and entrainment effects, in achieving timely compliance with Phase II 316(b) requirements, and in reducing impingement and entrainment at its facilities. We believe actions speak louder than words and urge the Commission and Staff to observe our actions and to reserve extreme policy decision to only if we fail to act effectively through compliance with Phase II 316(b). For the foregoing reasons, WCP requests that the Committee reject the staff recommendations and

conclusions in the OTC Report and adopt the suggestions proposed by WCP.

Respectfully submitted this July 15, 2005 at Sacramento, California.

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